

RRRRRRRRRRRR		UUU		UUU	NNN		NNN	000000000		FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRRRRRRRRRRR		UUU		UUU	NNN		NNN	000000000		FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRRRRRRRRRRR		UUU		UUU	NNN		NNN	000000000		FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRR	RRR	UUU		UUU	NNN		NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN		NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN		NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNNNNN		NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNNNNN		NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNNNNN		NNN	000	000	FFF	FFF
RRRRRRRRRRRR		UUU		UUU	NNN	NNN	NNN	000	000	FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRRRRRRRRRRR		UUU		UUU	NNN	NNN	NNN	000	000	FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRRRRRRRRRRR		UUU		UUU	NNN	NNN	NNN	000	000	FFFFFFFFFFFFFF	FFFFFFFFFFFFFF
RRR	RRR	UUU		UUU	NNN	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUU		UUU	NNN	NNN	NNN	000	000	FFF	FFF
RRR	RRR	UUUUUUUUUUUUUUUU		UUUUUUUUUUUUUUUU	NNN	NNN	NNN	000000000	000	FFF	FFF
RRR	RRR	UUUUUUUUUUUUUUUU		UUUUUUUUUUUUUUUU	NNN	NNN	NNN	000000000	000	FFF	FFF
RRR	RRR	UUUUUUUUUUUUUUUU		UUUUUUUUUUUUUUUU	NNN	NNN	NNN	000000000	000	FFF	FFF

```

000000  UU      UU      TTTT TTTT TTTT TTTT TTTT TTTT TTTT TTTT
000000  UU      UU      TTTT TTTT TTTT TTTT TTTT TTTT TTTT TTTT
00      00  UU      UU      TT      TT      XX      XX      TTTT TTTT TTTT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
00      00  UU      UU      TT      TT      XX      XX      TT      TT
000000  UUUUUUUUUU  TT      TT      XX      XX      TT      TT
000000  UUUUUUUUUU  TT      TT      XX      XX      TT      TT
                                ...
                                ...
                                ...
                                ...

LL      IIIIII  SSSSSSSS
LL      IIIIII  SSSSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SSSSSS
LL      II      SSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LLLLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLLLL  IIIIII  SSSSSSSS

```

```
0001 0 MODULE OUTTXT (
0002 0 IDENT = 'V04-000'
P 0003 0 %BLISS32[
P 0004 0 ADDRESSING_MODE(EXTERNAL=LONG_RELATIVE,NONEXTERNAL=LONG_RELATIVE)
0005 0 ]
0006 0 ) =
0007 1 BEGIN
0008 1
0009 1 *****
0010 1 *
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0028 1 *
0029 1 *
0030 1 *****
0031 1
0032 1 ++
0033 1 FACILITY: DSR (Digital Standard RUNOFF) / DSRPLUS
0034 1
0035 1 ABSTRACT: Outputs a single line of text optionally centered.
0036 1
0037 1
0038 1 ENVIRONMENT: Transportable
0039 1
0040 1 AUTHOR: R.W.Friday CREATION DATE: April, 1979
0041 1
```


OUTTXT
V04-000

Revision History

D 14
16-Sep-1984 01:23:16
14-Sep-1984 13:07:34

VAX-11 Bliss-32 V4.0-742
[RUNOFF.SRC]OUTTXT.BLI;1

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(2)

:	43	0042	1	%SBTTL 'Revision History'
:	44	0043	1	
:	45	0044	1	MODIFIED BY:
:	46	0045	1	
:	47	0046	1	007 KFA00007 Ken Alden 16-Mar-1983
:	48	0047	1	SCA is now initialized the same for both DSR and PLUS
:	49	0048	1	
:	50	0049	1	006 KAD00006 Keith Dawson 07-Mar-1983
:	51	0050	1	Global edit of all modules. Updated module names, idents,
:	52	0051	1	copyright dates. Changed require files to BLISS library.
:	53	0052	1	
:	54	0053	1	--

Module Level Declarations

```

56      0054 1 %SBTTL 'Module Level Declarations'
57      0055 1
58      0056 1
59      0057 1 | TABLE OF CONTENTS:
60      0058 1 |
61      0059 1 |
62      0060 1 | INCLUDE FILES:
63      0061 1 |
64      0062 1 |
65      0063 1 LIBRARY 'NXPORT:XPORT';           ! XPORT Library
66      0064 1 REQUIRE 'REQ:RNODEF';           ! RUNOFF variant definitions
67      0195 1
68      U 0196 1 %IF DSRPLUS %THEN
69      U 0197 1 LIBRARY 'REQ:DPDLLIB';           ! DSRPLUS BLISS Library
70      0198 1 %ELSE
71      0199 1 LIBRARY 'REQ:DSRLIB';           ! DSR BLISS Library
72      0200 1 %FI
73      0201 1
74      0202 1 |
75      0203 1 | MACROS:
76      0204 1 |
77      0205 1 |
78      0206 1 | EQUATED SYMBOLS:
79      0207 1 |
80      0208 1 EXTERNAL LITERAL
81      0209 1 RINTES : UNSIGNED(8);
82      0210 1
83      0211 1 |
84      0212 1 | OWN STORAGE:
85      0213 1 |
86      0214 1 OWN
87      0215 1 PP_SCA : $H_R_SCA_BLOCK;         !Used in PUSH_SCA, POP_SCA macros (defined in SCA.REQ).
88      0216 1 |
89      0217 1 | EXTERNAL REFERENCES:
90      0218 1 |
91      0219 1 |
92      0220 1 EXTERNAL
93      0221 1 MRA : REF FIXED STRING,
94      0222 1 SCA : SCA_DEFINITION,
95      0223 1 TSF : TSF_DEFINITION;
96      0224 1
97      0225 1 EXTERNAL ROUTINE
98      0226 1 ENDCHR,
99      0227 1 OUTNJ;
```

```
0228 1 GLOBAL ROUTINE OUTTXT (TEXT_PTR, TEXT_LENGTH, CENTERED) : NOVALUE =
0229 1
0230 1 ++
0231 1 FUNCTIONAL DESCRIPTION:
0232 1
0233 1     Outputs a generated line of text in the "official" way.
0234 1     This means that an MRA/TSF pair have to be allocated and set up.
0235 1     This routine is needed when there is no convenient MRA/TSF pair
0236 1     around that can be used for outputting text.
0237 1
0238 1 FORMAL PARAMETERS:
0239 1
0240 1     TEXT_PTR is a CHSPTR to the text to be centered and output.
0241 1     TEXT_LENGTH is the length of the text.
0242 1     CENTERED is the page width in which the text should be centered.
0243 1
0244 1 IMPLICIT INPUTS:      None
0245 1
0246 1 IMPLICIT OUTPUTS:     None
0247 1
0248 1 ROUTINE VALUE:
0249 1 COMPLETION CODES:     None
0250 1
0251 1 SIDE EFFECTS: None
0252 1
0253 1 --
0254 1
0255 2 BEGIN
0256 2 LOCAL
0257 2     HOLD_MRA,
0258 2     HOLD_SCA : VECTOR[SCA_SIZE],
0259 2     HOLD_TSF,
0260 2     TEMP_MRA : FIXED STRING[100],
0261 2     TEMP_TSF : VECTOR[TSF_SIZE],
0262 2     PTR;
0263 2
0264 2 !Remember location of current TSF
0265 2 HOLD_TSF = .TSF;
0266 2 !Set up substitute TSF
0267 2 INCR I FROM 0 TO TSF_SIZE - 1 DO TEMP_TSF[I] = 0;
0268 2 TSF = TEMP_TSF;
0269 2 !Set change-bar character to space.
0270 2 TSF_BAR_CHAR = %C' ';
0271 2
0272 2 !Remember location of current MRA
0273 2 HOLD_MRA = .MRA;
0274 2 !Set up substitute MRA;
0275 2 FS_MAXSIZE(TEMP_MRA) = 100;
0276 2 FS_INIT(TEMP_MRA);
0277 2 MRA = TEMP_MRA;
0278 2
0279 2 !Copy SCA before setting up a new one.
0280 2 PUSH_SCA; !Save the SAVED SCA bits.
0281 2
0282 2 INCR I FROM 0 TO SCA_SIZE -1 DO HOLD_SCA[I] = .SCA[I];
0283 2
0284 2 INCR I FROM 0 TO SCA_SAVE_START -1 DO SCA[I] = 0;
```



```

158 0285 2 INCR I FROM SCA_SAVE_END +1 TO SCA_SIZE -1 DO SCA[I] = 0;
159 0286 2 SCA_CC_OK = 0;
160 0287 2 SCA_KER = 0;
161 0288 2 SCA_AUTOTITLE = 0;
162 0289 2
163 0290 2 !Initialize SCA.
164 0291 2 SCA_FC_CASE = TRUE;
165 0292 2 SCA_RM = 150;
166 0293 2 SCA_LM = 0;
167 0294 2 SCA_SPACING = 1;
168 0295 2 SCA_FC = TRUE;
169 0296 2 SCA_FILL = TRUE;
170 0297 2 SCA_JUSTIFY = TRUE;
171 0298 2 SCA_CROCK = TRUE;
172 0299 2 SCA_WRD_PNTR = .FS START (MRA);
173 0300 2 SCA_WRD_CPEND = RINTES;
174 0301 2 !Set change-bar character(s) to space.
175 0302 2 SCA_BAR_CHAR = 'C';
176 0303 2 SCA_WRD_BAR_CHR = 'C';
177 0304 2
178 0305 2 PTR = .TEXT_PTR;
179 0306 2
180 0307 2 INCR I FROM 1 TO .TEXT_LENGTH DO
181 0308 2     ENDCHR (CH$RCHAR_A(PTR));
182 0309 2
183 0310 2 !Center the text
184 0311 2 TSF_ADJUST = MAX ((.CENTERED - .TEXT_LENGTH)/2, 0);
185 0312 2 !Output the line containing the centered text.
186 0313 2 OUTNJ ();
187 0314 2
188 0315 2 !Restore original SCA
189 0316 2 INCR I FROM 0 TO SCA_SIZE - 1 DO SCA[I] = .HOLD_SCA[I];
190 0317 2
191 0318 2 POP_SCA; !Restore the SAVED SCA bits.
192 0319 2
193 0320 2 !Restore original MRA
194 0321 2 MRA = .HOLD_MRA;
195 0322 2
196 0323 2 !Restore original TSF
197 0324 2 TSF = .HOLD_TSF;
198 0325 2
199 0326 1 END;
```

!End of OUTTXT

```

.TITLE OUTTXT
.IDENT \V04-000\

.PSECT $OWNS$,NOEXE,2

00000 PP_SCA: .BLKB 48

.EXTRN RINTES, MRA, SCA
.EXTRN TSF, ENDCHR, OUTNJ

.PSECT $CODE$,NOWRT,2

03FC 00000 .ENTRY OUTTXT, Save R2,R3,R4,R5,R6,R7,R8,R9 ; 0228
```

	59	00000000G	EF	9E	00002	MOVAB	MRA, R9		
	58	00000000G	EF	9E	00009	MOVAB	TSF, R8		
	57	00000000G	EF	9E	00010	MOVAB	PP_SCA, R7		
	56	00000000G	EF	9E	00017	MOVAB	SCA, R6		
	5E	FD6C	CE	9E	0001E	MOVAB	-660(SP), SP		
	54		68	D0	00023	MOVL	TSF, HOLD_TSF		0265
			50	D4	00026	CLRL	I		0267
			6E40	D4	00028	CLRL	TEMP_TSF[I]		
F9	50		27	F3	0002B	AOBLEQ	#39, I, 1\$		
	68		6E	9E	0002F	MOVAB	TEMP_TSF, TSF		0268
	50		68	D0	00032	MOVL	TSF, R0		
1C	A0		20	D0	00035	MOVL	#32, 28(R0)		0270
	55		69	D0	00039	MOVL	MRA, HOLD_MRA		0273
00A8	CE	64	8F	9A	0003C	MOVZBL	#100, TEMP_MRA+8		0275
		00AC	CE	D4	00042	CLRL	TEMP_MRA+12		0276
00A0	CE	00B0	CE	9E	00046	MOVAB	TEMP_MRA+16, TEMP_MRA		
00A4	CE	00A0	CE	D0	0004D	MOVL	TEMP_MRA, TEMP_MRA+4		
	69	00A0	CE	9E	00054	MOVAB	TEMP_MRA, MRA		0277
	67	64	B6	D0	00059	MOVL	@SCA+100, PP_SCA		
04	A7	68	B6	D0	0005D	MOVL	@SCA+104, PP_SCA+4		
08	A7	6C	B6	D0	00062	MOVL	@SCA+108, PP_SCA+8		
0C	A7	70	B6	D0	00067	MOVL	@SCA+112, PP_SCA+12		
10	A7	74	B6	D0	0006C	MOVL	@SCA+116, PP_SCA+16		
14	A7	78	B6	D0	00071	MOVL	@SCA+120, PP_SCA+20		
18	A7	7C	B6	D0	00076	MOVL	@SCA+124, PP_SCA+24		
1C	A7	0080	D6	D0	0007B	MOVL	@SCA+128, PP_SCA+28		
20	A7	0084	D6	D0	00081	MOVL	@SCA+132, PP_SCA+32		
24	A7	0088	D6	D0	00087	MOVL	@SCA+136, PP_SCA+36		
28	A7	008C	D6	D0	0008D	MOVL	@SCA+140, PP_SCA+40		
2C	A7	0090	D6	D0	00093	MOVL	@SCA+144, PP_SCA+44		
			50	D4	00099	CLRL	I		0282
F1	0114	CE40	6640	D0	0009B	MOVL	SCA[I], HOLD_SCA[I]		
	50	0000005F	8F	F3	000A2	AOBLEQ	#95, I, 2\$		0284
			50	D4	000AA	CLRL	I		
			6640	D4	000AC	CLRL	SCA[I]		
F9	50		18	F3	000AF	AOBLEQ	#24, I, 3\$		
	50		25	D0	000B3	MOVL	#37, I		0285
			6640	D4	000B6	CLRL	SCA[I]		
F5	50	0000005F	8F	F3	000B9	AOBLEQ	#95, I, 4\$		
		6C	B6	D4	000C1	CLRL	@SCA+108		0286
		0084	D6	D4	000C4	CLRL	@SCA+132		0287
		008C	D6	D4	000C8	CLRL	@SCA+140		0288
00D0	C6		01	D0	000CC	MOVL	#1, SCA+208		0291
78	B6	96	8F	9A	000D1	MOVZBL	#150, @SCA+120		0292
		74	B6	D4	000D6	CLRL	@SCA+116		0293
7C	B6		01	D0	000D9	MOVL	#1, @SCA+124		0294
0094	C6		01	D0	000DD	MOVL	#1, SCA+148		0295
68	B6		01	D0	000E2	MOVL	#1, @SCA+104		0296
64	B6		01	D0	000E6	MOVL	#1, @SCA+100		0297
70	B6		01	D0	000EA	MOVL	#1, @SCA+112		0298
00F8	C6	00	B9	D0	000EE	MOVL	@MRA, SCA+248		0299
0118	C6	00G	8F	9A	000F4	MOVZBL	#RINTES, SCA+280		0300
0088	D6		20	D0	000FA	MOVL	#32, @SCA+136		0302
0114	C6		20	D0	000FF	MOVL	#32, SCA+276		0303
	53	04	AC	D0	00104	MOVL	TEXT_PTR, PTR		0305
			52	D4	00108	CLRL	I		0307
			0A	11	0010A	BRB	6\$		

	00000000G	7E	83	9A	0010C	5\$:	MOVZBL	(PTR)+, -(SP)	
F1		EF	01	FB	0010F		CALLS	#1, ENDCHR	0308
		52	08	AC	F3	6\$:	AOBLEQ	TEXT_LENGTH, 1, 5\$	
50	0C	51	68	D0	0011B		MOVL	TSF, R1	0311
		AC	08	AC	C3		SUBL3	TEXT_LENGTH, CENTERED, R0	
		50	02	C6	00124		DIVL2	#2, R0	
			02	1B	00127		BGEQ	7\$	
	28	A1	50	D4	00129		CLRL	R0	
	00000000G	EF	50	D0	0012B	7\$:	MOVL	R0, 40(R1)	
			00	FB	0012F		CALLS	#0, OUTNJ	0313
			50	D4	00136		CLRL	I	0316
F1	6640	0114	CE40	D0	00138	8\$:	MOVL	HOLD_SCA[I], SCA[I]	
	50	0000005F	8F	F3	0013F		AOBLEQ	#95, I, 8\$	
	64	B6	67	D0	00147		MOVL	PP_SCA, @SCA+100	
	68	B6	04	A7	0014B		MOVL	PP_SCA+4, @SCA+104	
	6C	B6	08	A7	00150		MOVL	PP_SCA+8, @SCA+108	
	70	B6	0C	A7	00155		MOVL	PP_SCA+12, @SCA+112	
	74	B6	10	A7	0015A		MOVL	PP_SCA+16, @SCA+116	
	78	B6	14	A7	0015F		MOVL	PP_SCA+20, @SCA+120	
	7C	B6	18	A7	00164		MOVL	PP_SCA+24, @SCA+124	
0080	D6	1C	A7	D0	00169		MOVL	PP_SCA+28, @SCA+128	
0084	D6	20	A7	D0	0016F		MOVL	PP_SCA+32, @SCA+132	
0088	D6	24	A7	D0	00175		MOVL	PP_SCA+36, @SCA+136	
008C	D6	28	A7	D0	0017B		MOVL	PP_SCA+40, @SCA+140	
0090	D6	2C	A7	D0	00181		MOVL	PP_SCA+44, @SCA+144	
	69		55	D0	00187		MOVL	HOLD_MRA, MRA	0321
	68		54	D0	0018A		MOVL	HOLD_TSF, TSF	0324
			04	0018D			RET		0326

; Routine Size: 398 bytes, Routine Base: \$CODE\$ + 0000

: 200 0327 1
: 201 0328 1 END
: 202 0329 0 ELJDOM

!End of module

PSECT SUMMARY

Name	Bytes	Attributes
\$OWN\$	48	NOVEC, WRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$CODE\$	398	NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]XPORT.L32;1	590	0	0	252	00:00.1

OUTTXT
V04-000

Module Level Declarations

J 14
16-Sep-1984 01:23:16
14-Sep-1984 13:07:34

VAX-11 Bliss-32 V4.0-742
[RUNOFF.SRC]OUTTXT.BLI;1

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: _\$255\$DUA28:[RUNOFF.SRC]DSRLIB.L32;1 1248 53 4 86 00:00.3

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS\$:OUTTXT/OBJ=OBJ\$:OUTTXT MSRC\$:OUTTXT/UPDATE=(ENHS:OUTTXT)

: Size: 398 code + 48 data bytes
: Run Time: 00:11.8
: Elapsed Time: 00:26.9
: Lines/CPU Min: 1670
: Lexemes/CPU-Min: 16406
: Memory Used: 94 pages
: Compilation Complete

0346 AH-BT13A-SE
VAX/VMS V4.0

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NOXXTN LIS			